

AMENDMENT UNDER 37 C.F.R. § 1.111

U.S. Appln. No. 09/876,946

Attorney Docket No. Q64789

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (previously presented): A synthetic resin laminate having both photochromism characteristics and polarization characteristics consisting essentially of:

(1) two polycarbonate resin layers,

(2) a resin layer having photochromism characteristics comprising a cured polyurethane mixture of a polyurethane prepolymer, a curing agent consisting of a compound with a hydroxyl group on at least both ends obtained from diisocyanate and polyol, and at least one photochromic pigment and a resin layer having a polarization characteristics, said resin layer having photochromism characteristics and said resin layer having polarization characteristics being adhered to each other and interposed between said two polycarbonate resin layers, and

(3) an adhesive layer to adhere said resin layer having polarization characteristics to one of said two polycarbonate resin layers, wherein the other one of said two polycarbonate resin layers adheres to said resin layer having photochromism characteristics and has a thickness of 50 μm or above and a retardation value of 150 nm or below, or 3000 nm or above.

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2. (previously presented): The synthetic resin laminate according to claim 1, wherein said one polycarbonate resin layer to adhere to said adhesive layer has a thickness of 100 μm or above.

3. (previously presented) The synthetic resin laminate according to claim 1, wherein said resin layer having photochromism characteristics has a thickness of 50 μm to 250 μm .

Claims 4-6. (canceled)

7. (previously presented): The synthetic resin laminate according to claim 1, wherein said polyurethane prepolymer is a compound with an isocyanate group on both ends obtained from diisocyanate and polyol.

8. (previously presented): The synthetic resin laminate according to claim 1, wherein said polyurethane prepolymer is a compound derived from a prepolymer having a number average molecular weight of 500 to 5000 and a curing agent having a number molecular weight of 500 to 5000.

9. (original) The synthetic resin laminate according to claim 7, wherein said polyurethane prepolymer is a compound with an isocyanate group on both ends derived from diphenylmethane-4,4'-diisocyanate and polypropylene glycol.

10. (canceled)

11. (previously presented): The synthetic resin laminate according to claim 1, wherein said curing agent is a compound with a hydroxyl group on at least both ends obtained from tolylenediisocyanate and polypropylene glycol.

12. (previously presented): The synthetic resin laminate according to claim 1, wherein said cured polyurethane mixture further contains a hindered amine compound and/or a hindered phenol compound.

13. (previously presented) The synthetic resin laminate according to claim 1, wherein said resin layer having polarization characteristics comprises a polarizing film containing a dye(s) and being treated with a metal ion(s) and boric acid.

14. (previously presented): A molded article formed into a shape of curved surface by vacuum molding the synthetic resin laminate described in claim 1.

Claims 15-17. (canceled).

18. (currently amended): A process for producing a synthetic resin laminate having both photochromism characteristics and polarization characteristics according to claim 1, which comprises:

mixing uniformly a polyurethane prepolymer, a curing agent consisting of a compound with a hydroxyl group on at least both ends obtained from diisocyanate and polyol and at least one photochromic pigment to produce a resin solution;

coating a said resin solution containing said at least one photochromic pigment, a said polyurethane prepolymer and a said curing agent on a ~~polarizing film~~ a resin layer having polarization characteristics to form a resin solution layer;

adhering a first polycarbonate sheet to said resin solution layer;

coating an adhesive on the resin solution non-coated side of said ~~polarizing film~~ resin layer having polarization characteristics;

adhering a second polycarbonate resin sheet to said adhesive coated on said ~~polarizing film~~ resin layer having polarization characteristics to form a laminate; and

heat curing said resin solution in said laminate thus obtained,

thereby obtaining the synthetic resin laminate having both polarization characteristics and photochromism characteristics.

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19. (previously presented): The process according to claim 18, wherein said adhesive contains a solvent.

20. (previously presented): The process according to claim 19, wherein said solvent is removed by evaporation after coating said adhesive on said polarizing film.

21. (previously presented): The process according to claim 18, wherein said heat cure is performed at a temperature of 60 to 140 °C over 2 hours to one week.